

**CLAIMS:**

1. An electronic circuit, comprising:

a plurality of input/output (I/O) nodes for connecting the electronic circuit to at least a further electronic circuit via interconnects;

5 a test unit for testing the interconnects in a test mode of the electronic circuit,

the test unit comprising a combinatorial circuit having a plurality of inputs and an output, the combinatorial circuit implementing an exclusive logic function;

the I/O nodes being logically connected to the test unit in the test mode,

wherein:

10 a first selection of the I/O nodes is arranged to carry respective input signals

and is connected to the plurality of inputs of the combinatorial circuit; and

15 a second selection of the I/O nodes comprises a first I/O node and is arranged to carry respective output signals, the first I/O node being coupled to the output of the combinatorial circuit;

characterized in that the second selection of I/O nodes further comprises a second I/O node

20 that is coupled to an I/O node from the first selection of I/O nodes in the test mode via a connection that bypasses the combinatorial circuit.

2. An electronic circuit as claimed in claim 1, characterized in that the second

selection of I/O nodes further comprises a third I/O node being coupled to a further I/O node

25 from the first selection of I/O nodes in the test mode via a further connection that bypasses the combinatorial circuit.

3. An electronic circuit as claimed in claim 2, characterized in that the second I/O

node is coupled to the I/O node from the first selection of I/O nodes via a buffer circuit and

25 the third I/O node is coupled to the further I/O node from the first selection of I/O nodes via an inverter.

4. An electronic circuit as claimed in claim 1, characterized in that the electronic

circuit comprises a test control node, the electronic circuit being arranged to switch to the test

mode responsive to the reception of a test control signal on the test control node.

5. An electronic circuit as claimed in claim 1, characterized in that the electronic circuit comprises a main unit being logically connected to the I/O nodes in a functional mode of the electronic circuit, the main unit being arranged to bring the electronic circuit into the test mode upon receipt of a test control signal in a form of a predefined bit pattern through at least a subset of the first selection of I/O nodes.

6. An electronic circuit arrangement, comprising:

10 an electronic circuit as claimed in claim 4 or 5; and  
a further electronic circuit;

the electronic circuit having interconnects with the further electronic circuit; characterized in that the further electronic circuit is arranged to provide the electronic circuit with the test control signal and to provide the first selection of I/O nodes with test patterns for 15 testing the interconnects.

7. An electronic circuit arrangement as claimed in claim 6, characterized in that the further electronic circuit is arranged to receive test result data from the second selection of I/O nodes.

20 8. A method for testing interconnects between an electronic circuit and a further electronic circuit, the electronic circuit comprising:

a plurality of input/output (I/O) nodes for connecting the electronic circuit to the further electronic circuit via the interconnects;

25 a test unit for testing the interconnects in a test mode of the electronic circuit, the test unit comprising a combinatorial circuit having a plurality of inputs and an output, the combinatorial circuit implementing an exclusive logic function;

the I/O nodes being logically connected to the test unit in the test mode,  
wherein:

30 a first selection of the I/O nodes is arranged to carry respective input signals and is connected to the plurality of inputs of the combinatorial circuit; and

a second selection of the I/O nodes comprises a first I/O node and is arranged to carry respective output signals, the first I/O node being coupled to the output of the combinatorial circuit;

the method comprising the steps of:  
logically connecting the test unit to the interconnects;  
putting test data on the interconnects by the further electronic circuit; and  
receiving test result data through the first I/O node;

- 5 characterized in that the method further comprises the step of receiving further test result data through a second I/O node from the second selection of I/O nodes, the second I/O node being coupled to an I/O node from the first selection of I/O nodes in the test mode via a connection that bypasses the combinatorial circuit.